

EXECUTIVE SUMMARY



GLOBAL HEALTH SECTOR RESPONSE TO HIV, 2000–2015

FOCUS ON INNOVATIONS
IN AFRICA



GLOBAL HEALTH SECTOR RESPONSE TO HIV, 2000-2015
Focus on innovations in Africa

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The global HIV response has been remarkably transformed in the past 15 years.

In 2000, a global public health response to the epidemic did not yet exist. Some prevention programmes had achieved success, and a handful of mostly high-income countries provided access to HIV treatment. But these were the exceptions. In the entire WHO African Region, for example, about 11 000 of the almost 21 million people living with HIV were receiving antiretroviral therapy (ART). The situation was similar in the South-East Asia Region and Western Pacific Region, where about 4 million people were living with HIV. In much of the world, few people who acquired HIV survived.

Fifteen years later, a global public health response combining prevention, treatment and care has been built around the world.

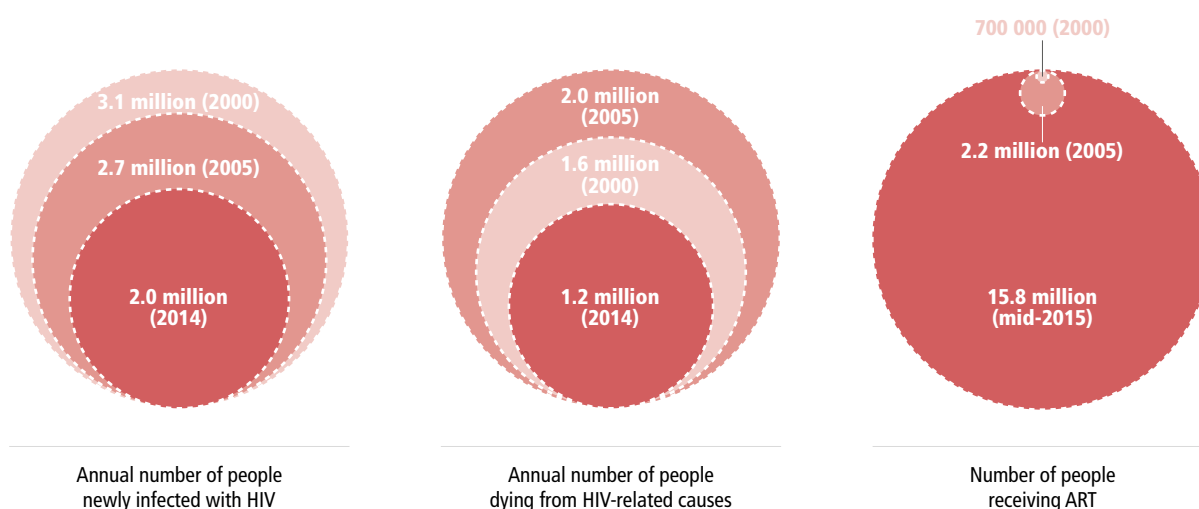
HIV programmes are now increasingly comprehensive. They promote and support prevention, bring treatment to many millions of people, deliver life-saving services to remote communities and make it easier for people to use and benefit from those services. They have proven that services can be delivered effectively, equitably and at massive scale in very difficult circumstances.

Successful HIV responses are not yet universal, but they are common enough to have made a huge impact in the past 15 years.

- **The number of adults and children newly infected with HIV** globally declined by 35% in 2000–2014.
- **The number of people dying from HIV-related causes** declined by 24% in 2000–2014 and by over 40% since 2004, the peak year.
- **HIV treatment** reached almost 16 million people in mid-2015 – more than 11 million of them in the African Region, where only about 11 000 people had been receiving treatment in 2000.
- **Millennium Development Goal 6**, which called for halting and beginning to reverse the spread of HIV by 2015, was achieved, and the HIV response contributed to significantly reducing child mortality (Millennium Development Goal 4) and maternal mortality (Millennium Development Goal 5).

The global health response to HIV represents one of the great public health feats of recent times. It is the result of enormous commitment and solidarity, strong partnerships, generous funding and other support, and far-sighted innovations – much of it evident in the African Region, which is a major feature of this report.

Fig. 1. Progress in the global HIV response, 2000–2015



Fewer people newly infected and fewer people dying

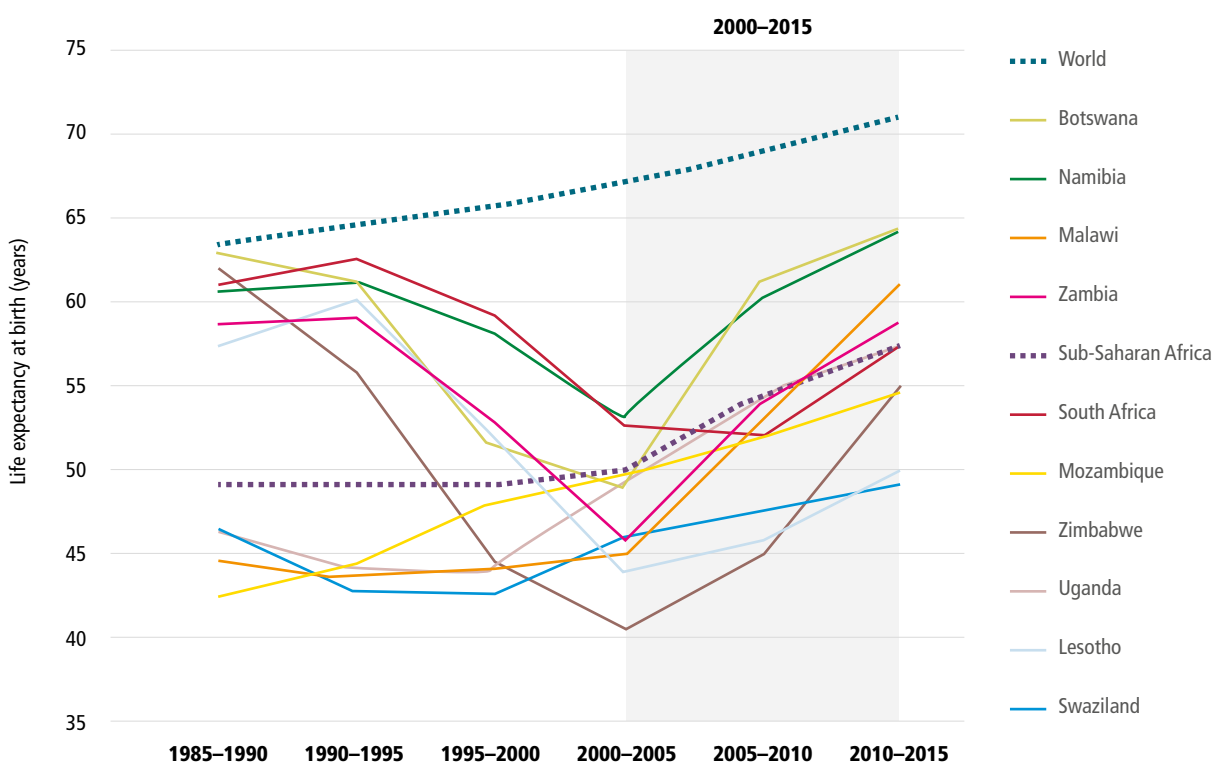
The estimated 2.0 million [1.9 – 2.2 million] people who acquired HIV globally in 2014 was the lowest number since 1990 and 35% fewer than the 3.1 million [3.0 – 3.3 million] in 2000. The decline was even steeper in the African Region – 41% between 2000 and 2014 – and exceeded 50% in several countries with a great burden of HIV infection.

The number of children (younger than 15 years) newly infected with HIV globally was reduced by 58% between 2000 and 2014. Rapid expansion of services for preventing the mother-to-child transmission of HIV and increasing use of more effective drugs prevented about 1.4 million children from becoming infected with HIV globally in the past 15 years, about 1.2 million of them in the African Region.

The number of people dying from HIV-related causes has fallen sharply as access to ART increased. The estimated 1.2 million [980 000–1 600 000] people who lost their lives to HIV in 2014 were 24% fewer than 2000 and 42% fewer than the peak in 2004. The number of children younger than 15 years dying from HIV-related causes declined even more rapidly than among adults.

The impact of HIV treatment programmes has been massive. An estimated 7.8 million HIV-related deaths were averted between 2000 and 2014. Several countries with a great burden of HIV infection have experienced substantial improvements in life expectancy.

Fig. 2. Changes in life expectancy at birth in selected countries in the WHO African Region with a high burden of HIV infection, 1985–2015



Source: United Nations, Department of Economic and Social Affairs, Population Division (2015). World Population Prospects: The 2015 Revision.

Very few other public health interventions in the recent past have had as rapid and dramatic an impact on individual and population health outcomes as the scaling up of ART, globally and especially in Africa.

At the end of 2014, about 4 in 10 people living with HIV globally were receiving ART. In the African Region, people living with HIV are now more likely to receive HIV treatment than their peers in other WHO regions, except for the Region of the Americas.

How Africa changed the course of its HIV epidemic

Faced with the largest HIV epidemics in the world, many countries in the African Region overcame formidable constraints to build and sustain national public health programmes powerful enough to turn the tide against their epidemics. The number of people acquiring HIV in the African Region fell sharply during 2000–2014, and the extraordinary rollout of HIV treatment averted an estimated 5.4 million deaths. Countries achieved this by assimilating innovations, by overcoming hurdles in implementation and by scaling up interventions, typically against a backdrop of limited resources and constrained health systems.

In many African countries, HIV services were brought

closer to communities by combining the respective strengths of health clinics and communities. Countries took HIV treatment to scale, building the world's biggest HIV treatment programmes, by using the public health approach recommended by WHO. They substantially cut children's risks of acquiring HIV by successfully linking HIV and antenatal care services. They implemented large-scale prevention programmes and adopted new methods, such as voluntary medical male circumcision, as well as new HIV testing approaches to diagnose more people living with HIV. They brought together services for preventing and treating HIV and tuberculosis in ways that saved an estimated 1.3 million lives in Africa between 2005 and 2014.

Progress in the WHO regions: success shadowed by major challenges

The health sector responses to HIV have grown and improved in all regions, though to varying degrees.

African Region

Some of the most impressive transformation has occurred in the African Region, where HIV responses have increased dramatically in both scale and quality. The number of adults and children newly infected with HIV in the African Region was cut by 41% in 2000–2014, from 2.3 million [2.2 – 2.4 million] to 1.4 million [1.2 – 1.5 million]. This was the only region to register a consistent drop in new infections after 2010. Sustained national prevention programmes contributed to these declines. Scaled-up and improved programmes for preventing the mother-to-child transmission of HIV led to a substantial decline in the annual number of children acquiring HIV since 2000. However, a recent rise in the number of adults and children newly infected in a few countries shows that insufficient HIV responses lead to rebounding epidemics.

An extraordinary treatment scale-up is continuing, with an estimated 11.4 million people receiving ART in mid-2015. ART coverage reached 41% [38–46%] in 2014, up from less than 1% in 2000. The annual number of people dying from HIV-related causes was almost halved in the past decade. The estimated 790 000 [690 000–990 000] people who died from HIV-related causes in the African Region in 2014 were 48% fewer than the 1.5 million [1.3 – 1.9 million] people who lost their lives to HIV in 2004, when HIV deaths peaked.

Major challenges remain in this region, which continues to bear by far the greatest HIV burden in the world. Both the coverage and quality of HIV services is insufficient in some large countries with high HIV prevalence.

Although declining, the numbers of people acquiring HIV infection are still high. Young women and adolescent girls continue to be disproportionately at risk of acquiring HIV. Adolescents in general are not being reached sufficiently with prevention and treatment services, and men are less likely than women to take HIV tests or receive HIV treatment. The coverage of ART for children, although improving, is also low and requires concerted improvements.

Region of the Americas

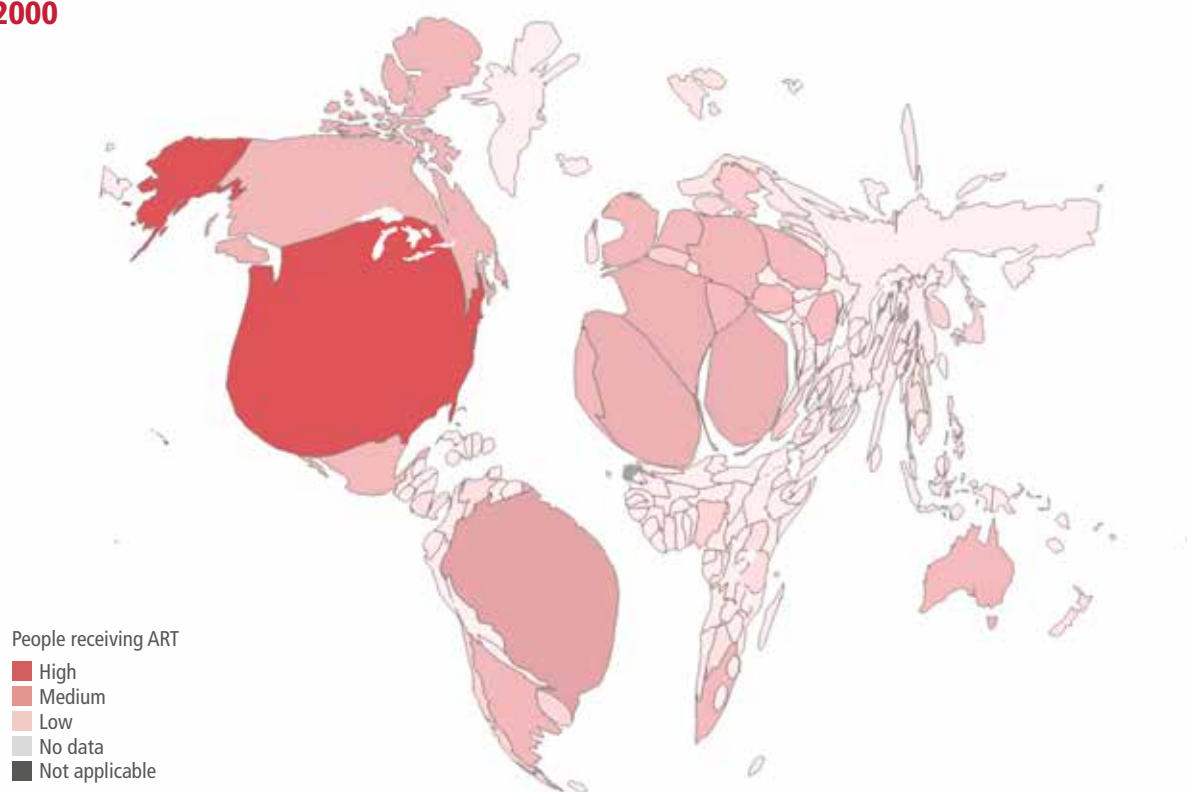
After impressive declines between the mid-1990s and mid-2000s, the annual number of people newly infected with HIV in the Region of the Americas has stayed more or less steady in the past decade. ART coverage in these countries is among the highest in the world, with regional coverage estimated at 46% [35–60%] in 2014. The annual number of people dying from HIV-related causes was reduced by 33% since 2000, to 66 000 [42 000–120 000] in 2014. Most countries in this Region have aligned their national HIV strategic plans with an ambitious set of targets for 2020 and 2030 or are busy doing so. Five countries have already adopted a policy of initiating ART for all people living with HIV, and several more are considering adopting the same approach. In 2015, Cuba became the first low- and middle-income country to validate the elimination of mother-to-child transmission of HIV.

South-East Asia Region

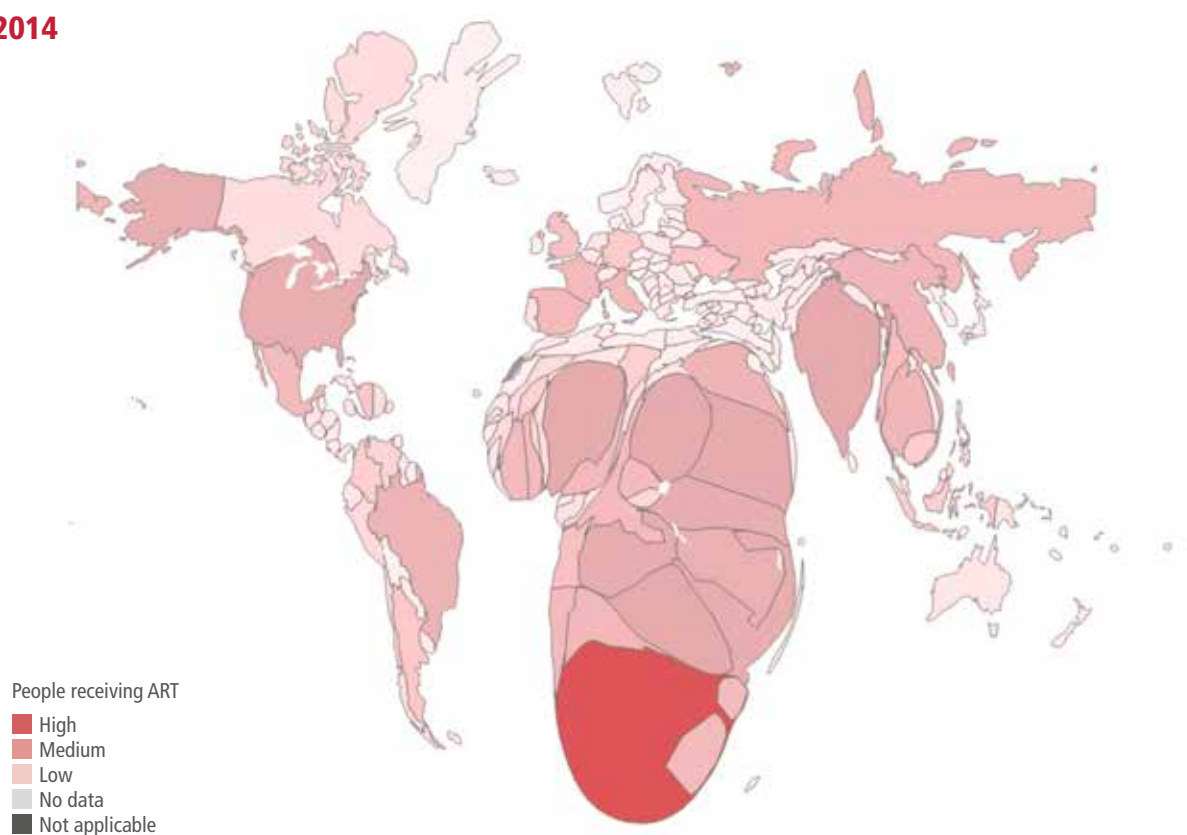
The annual number of people newly infected with HIV in the South-East Asia Region decreased substantially up to 2009 before stabilizing. The number of people dying from HIV-related causes rose significantly until the mid-2000s, when ART became more widely accessible. The approximately 1.2 million people who were receiving ART at the end of 2014 translated to treatment coverage of about 36% [33–38%], slightly less than the global average of 40% [37–45%]. HIV-related deaths declined by about

Fig. 3. Countries with their size proportional to number of people on treatment in 2000 and 2014

2000



2014



Source: Global AIDS Response Progress Reporting (UNAIDS/UNICEF/WHO).

32% from the peak in 2005 to 190 000 [120 000–380 000] in 2014. Thailand, which has adopted a treat-all approach, is close to achieving universal coverage of ART. Overall, intensified efforts are needed in this region to extend the progress made thus far, especially to expand HIV services for key populations and vulnerable groups.

European Region

In contrast to the global trend, the number of people newly infected with HIV has increased in the European Region since 2000, especially in the eastern part of the Region. ART coverage for people living with HIV has increased in recent years but was only 19% [17–22%] in 2014 in the low- and middle-income countries in the region; less than half the global coverage. The estimated annual number of people dying from causes attributable to HIV rose by more than 150% between 2000 and 2014 – from 28 000 [21 000–40 000] to 72 000 [45 000–110 000] – but there has been a slight decline since 2012. Stronger government support for comprehensive HIV responses for key populations is needed to reverse the rise in the number of people newly infected with HIV and to improve treatment coverage and outcomes.

Eastern Mediterranean Region

The annual number of people newly infected with HIV more than doubled in the Eastern Mediterranean Region between 2000 and 2014. Although the number of people receiving ART has increased steadily, the Region had the lowest ART coverage in the world in 2014, at about 10%. The number of people dying from HIV-related causes increased from 3900 [2300–7000] to 15 000 [9800–28 000] between 2000 and 2014. Several

countries in the Region have HIV programmes focusing on key populations, but these have not yet succeeded in reversing the increases in new HIV infections. The challenge is magnified by the fact that some 15 countries in the Region are affected by conflict or have large refugee populations, which place additional strains on HIV responses and health systems. Improving levels of HIV knowledge, especially among key populations, and improved HIV estimates are among the recent, positive developments that are expected to aid the Region's HIV response.

Western Pacific Region

The Western Pacific Region has brought the number of people in key populations newly infected with HIV largely under control with focused interventions. The annual number of people newly infected with HIV in the Region declined substantially up to 2008 and then remained steady at about 95 000. The provision of opioid substitution therapy has substantially contributed to reducing the number of people who inject drugs who acquire HIV in some countries, including China, Malaysia and Viet Nam. The number of people dying from HIV-related causes began declining in the mid-2000s, as provision of ART expanded. ART coverage was an estimated 37% [31–48%] at the end of 2014. HIV-related deaths declined by 27% from their peak of 68 000 [51 000–100 000] in 2005 to 50 000 [37 000–80 000] in 2014. Success in addressing the stigma and discrimination experienced by key populations will help efforts to broaden access for HIV services and link and retain greater numbers of people living with HIV in care.

Closing the remaining gaps and accelerating impact

Remarkable as the achievements of the past 15 years have been, they are shadowed by major unfinished business and formidable challenges. Many countries have made great progress, but some have been unable to sustain early gains and others have failed to curb their HIV epidemics. Almost half the people living with HIV are undiagnosed and are therefore not receiving ART. Treatment is being scaled up unevenly, with some regions and countries lagging considerably.

Closing the remaining gaps in the HIV response will require action and innovation even more impressive than that implemented this far. Nevertheless, the innovations and successes of the past 15 years position the world to shift the global HIV response into higher gear.

Ending the AIDS epidemic by 2030 is the challenge set by the Sustainable Development Goals, which highlight the role of health in averting poverty and facilitating development. Mathematical models show that ending the AIDS epidemic as a public health threat is indeed feasible.

This goal has been crystallized into a set of global Fast-Track targets promoted by the Joint United Nations Programme on HIV/AIDS and WHO. They include:

- a 75% reduction (compared with 2010) in the annual number of people newly infected with HIV, and zero new HIV infections among children;
- reducing the annual number of people dying from HIV-related causes to less than 500 000 by 2020; and
- 90% of people living with HIV know their HIV status, 90% of those diagnosed with HIV have initiated ART, and 90% of the people receiving treatment have suppressed viral loads by 2020.

Despite impressive gains, the rate at which new HIV infections and HIV-related deaths are decreasing needs to accelerate markedly to reach these targets. The gaps are even greater in some countries and regions in which the achievements in the past 15 years have been modest, as shown in this report. Various disparities also mean that

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the benefits of HIV interventions currently are not spread equitably across countries and populations.

Countries need to rapidly increase coverage of high-impact, evidence-based interventions along the entire cascade of services for preventing, diagnosing and treating HIV. They need to do this with an emphasis on reaching the populations and geographical locations with the greatest burden and greatest need, while assuring the quality of the services.

Preventing people from becoming infected

Reducing the number of people newly infected with HIV by 75% by 2020 requires wider and more effective use of combination prevention and bolstering it with new tools and approaches. The number of adolescents and young people acquiring HIV has to be reduced drastically. In Africa, this requires a special focus on using more effective ways to protect adolescent girls and young women from becoming infected with HIV.

Condom use has increased but not consistently enough to realize its full benefits. Uptake of voluntary medical male circumcision in the designated focus countries has increased rapidly, with more than 10 million procedures performed by late 2015 and some countries already reaching the 80% coverage target. Several other countries have opportunities for more rapidly scaling up this intervention. HIV prevention programmes addressing sexual behaviour need to be sustained, including in the African Region, where they have contributed to the decline in the numbers of people acquiring HIV.

The use of ARV medicines as part of combination HIV prevention is a great opportunity to reduce new HIV infections more rapidly. However, realizing the full preventive potential of ARV medicines requires that countries implement a treat-all approach and ensure high levels of treatment adherence. Targeted provision of pre-exposure prophylaxis, in combination with other prevention tools, also has great potential to reduce the number of people newly infected if scaled up strategically among populations at high risk of infection.

Reaching key populations with HIV services

Proven and affordable methods exist for preventing people in key populations¹ from becoming infected, but they are not used widely enough to have a major impact. Legal and social barriers to wider access remain widespread. As a consequence, more than one third of the people newly infected with HIV in 2014 were associated with key populations.

There have been notable successes in preventing HIV infections among female sex workers, frequently as a result of community-based prevention services and initiatives. These need to be supported more strongly and emulated more widely.

Successes in reducing the number of men who have sex with men acquiring HIV are shadowed by rising incidence in some countries despite longstanding prevention and treatment programmes.

Many countries with significant numbers of people who inject drugs are failing to stabilize or reverse HIV transmission associated with drug injecting. Increasing numbers of countries have introduced needle and syringe programmes or opioid substitution treatment, but coverage is generally poor, even in countries with many people who inject drugs and with high HIV prevalence among them.

Eliminating new infections among children

The rate of mother-to-child transmission of HIV in low- and middle-income countries has been cut by more than half since 2000 – from about 37% to 15% in 2014. Some countries in the African Region are approaching the very low mother-to-child transmission rates achieved in high-income countries, but several others lag far behind at the moment. Further progress can be achieved by simplifying and expanding the use of ARV medicines for preventing mother-to-child transmission and protecting pregnant women's own health (option B+: providing lifelong ART to all pregnant and breastfeeding women living with HIV regardless of CD4 count or WHO clinical stage).

Diagnosing more people living with HIV

Drastically reducing the number of people losing their lives to HIV requires successfully shifting to a treat-all approach, as recommended in the latest WHO guidelines. This requires finding more effective and efficient ways of diagnosing much greater numbers of people living with HIV and successfully linking them to treatment and care services.

Almost half the people living with HIV are unaware that they have acquired the virus, and current approaches are not reaching adequate numbers of people in key populations, a situation that has changed little in the past 15 years.

New HIV testing approaches, including self- and community-based testing and new quality-assured testing technologies, hold great promise. The approaches need to match the epidemic of a given country, population and place. Antenatal services account for much HIV testing, which is a major reason why, in all regions, men are less likely than women to undergo HIV testing.

Many people who test HIV-positive drop out of care before starting ART, which leaves an important gap in the cascade of services. Many improvements are available, including strengthening referral procedures and removing unnecessary delays before initiating ART. As more countries move towards initiating ART regardless of CD4 cell count, pre-ART care should become less important and linkage to ART is expected to strengthen.

¹ Key populations are considered to be at very high risk of HIV infection and typically include men and transgender women who have sex with men, sex workers and their clients, and people who inject drugs. Prisoners, migrant workers, certain transport workers and military personnel often are also at high risk for HIV infection.

Reaching more people with HIV treatment

The 15.8 million people receiving ART in mid-2015 ranks among the great public health achievements of recent times. The next challenge is to accelerate treatment access so that ART is available to all people living with HIV. Global coverage of ART increased from about 2% of people living with HIV in 2000 to 40% in 2014 – about halfway to the target set for 2020.

High mortality rates among adolescents living with HIV highlight the need to improve their access and adherence to ART. Sex workers, people who inject drugs, prisoners, transgender people and men and who have sex with men face multiple barriers that deny them the benefits of HIV treatment and care services.

Meanwhile, in the African Region, men eligible for ART in accordance with WHO guidelines are less likely to receive it than women and more likely not to be retained in care. HIV-related mortality rates are also higher among men receiving ART than among their female counterparts in most countries in the African Region.

Maximizing the benefits of HIV treatment requires a systematic approach to close the gaps at each stage of the cascade of HIV services, as shown in this report.

The benefits of ART – both at the individual and population levels – are optimized when people living with HIV start treatment early. Despite a shift toward initiating ART earlier

in all regions over the past decade, many people (especially men and key populations) still enrol in HIV care late, with advanced HIV disease, resulting in poorer treatment outcomes.

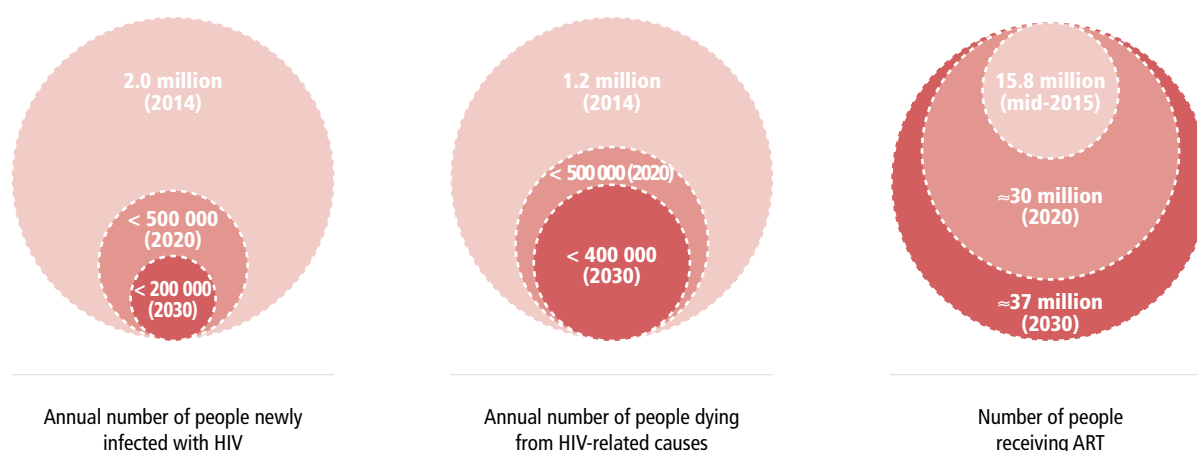
Adopting the treat-all approach recommended by WHO along with simplified referral procedures should enable more people to start ART earlier. In the several countries that have already opted for this approach, coverage of both HIV testing and treatment has improved markedly, as has retention in care.

Achieving good treatment outcomes

The ultimate goal of ART is to suppress HIV to stop the progression of HIV-related disease and drastically reduce the risk of onward transmission. Studies show that very good viral suppression outcomes can be achieved, including in resource-limited settings. However, many people receiving ART drop out of care before achieving or sustaining viral suppression. In recent years, only about 45% of adults who started ART remained virally suppressed after three years.

Services should be organized to minimize leakage and maximize retention and adherence. Every effort must be made to retain more people on ART in care, prevent treatment interruptions, use robust ART regimens, conduct effective HIV drug resistance surveillance and monitor and avoid treatment failure. The emergence of HIV drug resistance must be monitored and addressed.

Fig. 4. Progress required to reach key 2020 and 2030 HIV targets



The next 15 years: towards ending the AIDS epidemic

Strong commitment, supportive partnerships and major innovations in technologies and service delivery have brought the world to a point where ending the AIDS epidemic as a serious public threat by 2030 is a realistic prospect.

Reaching that goal will require actions that can reduce the number of people newly infected with HIV and dying from HIV-related causes even more rapidly than in the past 15 years. Against the backdrop of a broad, multisectoral response, the health sector will play a vitally important role.

The proposed Global Health Sector Strategy on HIV 2016–2021 maps the way forward along five strategic directions:

- using accurate strategic information to understand HIV epidemics and focus responses;
- defining the essential packages of high-impact HIV interventions along the continuum of HIV services;
- effectively delivering the cascade of HIV services to different populations and locations to achieve equity, maximize impact and ensure quality;
- implementing sustainable funding models for HIV responses and reducing costs; and
- innovating new HIV technologies and ways of organizing and delivering services.

Based on reviews of the latest evidence, WHO has also adapted its treatment, testing and strategic information guidelines to provide a package of support that can guide accelerated implementation at each stage of the cascade of services. The priority actions and approaches outlined in the proposed strategy and in WHO's technical guidance will be crucial for meeting the major challenges that lie ahead.

Doing more, more rapidly and more effectively

The world has arrived at a critical juncture. The remarkable impact of the public health response to the HIV epidemic has defied most expectations. Nevertheless, more has to be done, more rapidly and more effectively to end the AIDS epidemic.

The great advantage today is the wealth of experiences and lessons learned during the past 15 years, the array

of powerful tools and proven methods that exist, the partnerships that have been built, and the evident success of so many key innovations, especially in the African Region.

If countries use these experiences, tools and resources to the full, they will be able to forge a sustainable path to end AIDS within this generation and to help achieve the aims and realize the spirit of the Sustainable Development Goals.



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